What is claimed is:

1. A method for selecting segments from a corpus of source utterances for synthesizing a target utterance, comprising:

searching a graph in which each path through the graph identifies a sequence of segments of the source utterances and a corresponding sequence of unit labels that characterizes a pronunciation of a concatenation of that sequence of segments, each path being associated with a numerical score that characterizes a quality of the sequence of segment;

wherein searching the graph includes matching a pronunciation of the target utterance to paths through the graph, and selecting segments for synthesizing the target utterance based on numerical scores of matching paths through the graph.

2. The method of claim 1 wherein selecting segments for synthesizing the target utterance includes identifying a path through the graph that matches the pronunciation of the target utterance and selecting the sequence of segments that is identified by the determined path.

3. The method of claim 2 wherein determining the path includes determining a best scoring path through the graph.

4. The method of claim 3 wherein determining the best scoring path involves using a dynamic programming algorithm.

5. The method of claim 2 further comprising concatenating the selected sequence of segments to form a waveform representation of the target utterance.

6. The method of claim 1 wherein selecting the segments for synthesizing the target utterance includes determining a plurality of paths through the graph that each matches the representation of the pronunciation of the target utterance.

7. The method of claim 6 wherein selecting the segments further includes forming a plurality of sequences of segments, each associated with a different one of the plurality of paths.

8. The method of claim 7 wherein selecting the segments further includes selecting one of the sequences of segments based on characteristics of those sequences of segments not determined by the corresponding sequences of unit labels associated with those sequences.

9. The method of claim 1 further comprising forming a representation of a plurality of pronunciations of the target utterance, and wherein searching the graph includes matching any of the pronunciations of the target utterance to paths through the graph.

10. The method of claim 1 further comprising forming a representation of the pronunciation of the target utterance in terms of alternating unit labels and transitions labels.

11. The method of claim 1 wherein the graph includes a first part that encodes a sequence of segments and a corresponding sequence of unit labels for each of the source utterances, and a second part that encodes allowable transitions between segments of different source utterances and encodes a transition score for each of those transitions; and

matching the pronunciation of the target utterance to paths through the graph includes considering paths in which each transition between segments of different source utterances identified by that path corresponds to a different subpath of that path that passes through the second part of the graph.

12. The method of claim 10, wherein selecting the segments for synthesis includes evaluating a score for each of the considered paths that is based on the transition scores associated with the subpaths through the second part of the graph.

13. The method of claim 10 wherein a size of the second part of the graph is substantially independent of a size of the source corpus, and a complexity of matching the pronunciation through the graph grows less than linearly with the size of the corpus.

14. The method of claim 1 further comprising:

providing the corpus of source utterances, each source utterance being segmented into a sequence of segments, each consecutive pair of segments in a source utterance forming a segment boundary, and each speech segment being associated with a unit label and each segment boundary being associated with a transition label; and

forming the graph, including forming a first part of the graph that encodes a sequence of segments and a corresponding sequence of unit labels for each of the source utterances, and forming a second part that encodes allowable transitions between segments of different source utterances and encodes a transition score for each of those transitions.

15. The method of claim 14 wherein forming the second part of the graph is performed independently of the utterances in the corpus of source utterances.

16. The method of claim 14 further comprising:

augmenting the corpus of source utterances with additional utterances; and

augmenting the graph including augmenting the first part of the graph to encode the additional utterances, and linking the augmented first part to the second part without modifying the second part based on the additional utterances.

17. The method of claim 1 wherein the graph is associated with a finite-state transducer which accepts input symbols that include unit labels and transition labels, and that produces identifiers of segments of the source utterances, and wherein searching the graph is equivalent to composing a finite-state transducer representation of a pronunciation of the target utterance with the finite-state transducer with which the graph is associated.

18. Software stored on a computer-readable medium for causing a computer to perform functions comprising selecting segments from a corpus of source utterances for synthesizing a target utterance, wherein selecting the segments comprises:

searching a graph in which each path through the graph identifies a sequence of segments of the source utterances and a corresponding sequence of unit labels that characterizes a pronunciation of a concatenation of that sequence of segments, each path being associated with a numerical score that characterizes a quality of the sequence of segment;

wherein searching the graph includes matching a pronunciation of the target utterance to paths through the graph, and selecting segments for synthesizing the target utterance based on numerical scores of matching paths through the graph.